

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
PUBLIC NOTICE FOR AN ALTERNATIVE MIXING ZONE
FOR ACUTE EFFLUENT TOXICITY

PUBLIC NOTICE NO. 2010 - 3 - AMZ/AET
PUBLIC NOTICE DATE: MARCH 8, 2010
RESPONSE DATE DUE: APRIL 8, 2010

Applicant: W.R. Grace and Company-Conn. Grace Davison, NPDES Permit No. IN0000329, LAKE COUNTY, 5215 Kennedy Av, East Chicago, IN.

I. Type of Application: Alternative Mixing Zone for Acute Toxicity: On February 15, 2010, W.R. Grace and Company-Conn. Grace Davison, submitted an application for an Alternative Mixing Zone for Acute Toxicity the requirements of 327 IAC 5-2-11.4 (b) (4). The rule establishes a process where the permittee submits certain requirements when requesting an alternative mixing zone under 327 IAC 5-2-11.4 (b) (4) (A) and, if, the discharger demonstrates what is required under 327 IAC 5-2-11.4 (b) (4) (B), an alternative mixing zone may be granted. IDEM proposes to incorporate the alternative mixing zone as a condition of the permit through a modification of NPDES Permit No. IN0000329.

II. Facility Operations: W.R. Grace and Company-Conn. Grace Davison is in the business of manufacturing sodium silicate and colloidal silica. Wastewater sources include process wastewater and storm water runoff. Process wastewater flows into their wastewater treatment process composed of flocculation, clarification, filtration and pH adjustment. This process produces a filter cake, which is later land-filled. The wastewater is treated with a series of acid, lime, and polymer treatment to precipitate and settle the suspended solids. The wastewater treatment system discharges through Outfall 003. The discharge from the W.R. Grace and Company-Conn. Grace is to Grand Calumet River (located within the Great Lakes system) with a $Q^{7,10}$ low flow value of 353 cfs.

On May and June of 2007, the facility conducted the permit-required Whole Effluent Toxicity (WET) tests and the results indicated toxicity to the species *Ceriodaphnia dubia*. In September of 2007, the facility initiated the Toxicity Reduction Evaluation (TRE) to determine to cause of the toxicity. A feasibility study was also initiated to analyze options to address the toxicity. Alternatives included a multi-port diffuser, directing flow to the East Chicago Sanitary District, enhanced filtration to reduce suspended solids and salt content reduction. In March of 2009, the facility met with IDEM personnel to review the design proposal for a single port, high-velocity discharge. Through the TRE evaluation, it was determined that the cause of toxicity was the sulfate present in the effluent and the tests also provided the concentrations at which the effluent is not toxic.

III. Contact Person: Ms. Nahir Bacardi, Office of Water Quality/NPDES Permits Branch, 100 N Senate Av, (mail code: 65-42) Indianapolis, IN 46204-2251; phone: 317/234-4222, or nbacardi@idem.IN.gov.

IV. Comments/Public Meeting: In accordance with rule 327 IAC 5-2-11.4 (b) (4) (F), IDEM is required upon receipt of the application, to provide notice, solicit public comment and, if requested, schedule and hold a public meeting. Anyone interested is invited to submit **written** comments regarding the formulation of the Final Determination to issue the Alternative Mixing Zone for Acute Toxicity. **Public Meeting:** written requests must include the name & contact information (address, phone, E-mail) of the person making the request, the interest of the person making the request, persons represented by the person making the request, the reason for the request, and the issues proposed for consideration at the Meeting. If the Department determines a need for a Public Meeting based on the comments and requests received, notice will be published 30 days prior, in the newspaper of the geographical area of the discharge. All comments & requests **must be postmarked no later than April 8, 2010**. Notice will be sent to all persons submitting comments or requesting notification. Notice of Final Permit action will not be made to persons who fail to request such notice.

All related documents are on file & may be inspected at IDEM, Office of Water Quality/NPDES Permit Section, 12th floor/Rm 1203, 100 N. Senate Ave, Indpls., IN from 9 - 4, M - F, (copies 10¢ per page).

V. Additional Information: Based on staff review and application of pertinent standards & regulations, IDEM has determined the application to be complete and proposes to incorporate the Alternative Mixing Zone for Acute Toxicity as a condition of the NPDES permit through modification of NPDES Permit No. IN0000329 in accordance with 327 IAC 5-3.5-6.